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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/018,104	02/03/1998	JAMES L. HOBART	PHAN-00100	9278

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EXAMINER

SHAY, DAVID M

ART UNIT	PAPER NUMBER
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3739

37

DATE MAILED: 07/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/018,104

Applicant(s)

Holant et al

Examiner

d-shay

Group Art Unit

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—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on May 5, 2003.
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-14, 17-24 + 41-49 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-14, 17-24 + 41-49 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of References Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

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The examiner has considered applicants arguments to the following effect.

While the examiner neither disputes that the disclosure provides support for the use of two lasers in the laser source, nor that there is support for combining the two beams. In fact these teachings are supported by the cited passages at page 2 of the instant response. However, the claims rejected under 35 USC 112, first paragraph recite, in pertinent part “wherein the laser source comprises two or more lasers, each for generating laser pulses to provide the series of laser pulses and sufficient to generate ablation when the laser source is in ablation mode” this language, as understood by the examiner, requires that each laser produce ablation pulses when the source is in ablation mode. Such teaching has not been found by the examiner in the originally filed disclosure, nor is it supported by the cited passages.

Similarly the language of claim 11 “wherein the pulses of laser light are combined in an alternating fashion for generating a laser output having a predetermined absorption, wherein the predetermined absorption forms a predetermined absorption, wherein the predetermined absorption forms a predetermined coagulation depth”. Requires that a property referred to as “absorption” forms the coagulation depth, which property results from the combination of the beams in an alternating fashion. The examiner has not found, nor do the cited passages support controlling the coagulation depth by a property determined by the combination of the beams in an alternating fashion.

With regard to the teachings of Dwyer and the applicability thereof to claims 17 and 41, applicant’s attention is respectfully invited to Figure 3 of Dwyer et al and the attendant disclosure. As can be easily seen, Figure 3 shows two lasers (35 and 36) which are controlled by a wavelength selecting switch (38) and whose outputs are combined at beam splitter (37). This

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is determined at column 4, lines 12-22 of Dwyer et al. It is noted that the pulses produced by the lasers of Dwyer et al must have both a power and duration else they would not exist.

These are the structures required by claim 17. The claim does contain a functional statement regarding the function of the control system: “for controlling generation of the laser pulses...” The examiner first notes that this recitation is not of the proper form to invoke 35 USC 112, sixth paragraph (see MPEP 2181) thus the function is accorded little weight. Secondly the functional recitation merely recites that the coagulation depth be controllable and since Dwyer et al teach that the “respective lasers are turned on and off as desired “ (see column 4, lines 20 and 21) this is considered to provide the recited controllability even assuming that the claim language in question were crafted to invoke the sixth paragraph of 35 U.S.C. 112.

Regarding claim 41, applicant’s attention is once again invited to Figure 3 of Dwyer et al and lines 12-22 in column 4 thereof and the structures set forth above. Additionally optical fiber 21 constitutes a “means to direct...” as recited in the claim. It is noted that the ability of the switch to provide pulses from alternating lasers renders it a “means to alternate between pulses of the first set of laser pulses and pulses of the second set of laser pulses” as claimed.

With regard to the rejection under 35 U.S.C. 103, applicant argues each reference singly with no regard to what the combined teachings would suggest to one having ordinary skill in the art. Applicant also argues, without any rationale other than the aforementioned piecemeal treatment of the applied references that a *prima facie* case of obviousness has not been made. Next applicant asserts that no suggestion within the references or “within the general knowledge of the art to combine such a large number of references.” The examiner firstly notes that the number of references combined, standing alone, does not provide a showing of non-obviousness

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(MPEP 2145). It is further noted that providing the combined coagulation and ablation functions in a single device is already known to be desirable, as shown by Dwyer et al and Dew, therefore to produce such a device from a device that only provided e.g. a cutting functionality at no extra cost is clearly motivated by economic considerations.

As already set forth above and in the previous explanation of the teaching of Dwyer et al, this reference clearly teaches combining the laser outputs in an alternating fashion in that first one laser is activated, then the other, both pulses being guided to a common optical path leading to an output device, such as the optical fiber. If applicant continues in this assertion, the examiner respectfully requests that the exact aspect of the claimed "combining the beams in an alternating fashion" which is perceived to be absent from Dwyer et al be specifically pointed out, that the examiner may determine the precise limitations upon which applicant is predicating the patentability of the claimed invention.

The rejections set forth in the previous office action are hereby repeated.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support in the originally filed disclosure for each of two lasers generating pulses to generate ablation, nor combining the pulses of two sources to form a predetermined coagulation depth.

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Claims 17 and 41 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Dwyer et al.

See Figure 3, and column 4 lines 12 et seq.

Claims 1-3, 6-8, 11-14, 17-19, 41, and 43-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sklar et al in combination with Dew ('969), Anderson et al, Belkin et al and Dwyer et al. Sklar et al teach a laser system including multiple lasers with a graphical interface and teach that it can be used for any type of surgery with any type of laser and that the depth of the laser action can be input and displayed. Dew ('969) teaches the use of a carbon dioxide laser operating at 10.6 microns as a cutting laser in a laser system comprised of multiple lasers and teaches that the power of a pulse determines the amount of heat deposited in the tissue and that the same type of laser can be used for cutting and coagulating. Belkin et al teach that the carbon dioxide lasers operating at 10.6 microns can be used to heat, rather than cut tissue. Anderson et al teach the way parameters such as absorptivity spot size, and pulse width interrelate to control the amount of energy absorbed by tissue. Dwyer et al teach performing surgery by alternating cutting and coagulation. It would have been obvious to the artisan of ordinary skill to use a carbon dioxide laser as taught by Dew ('969) in the graphical user interface of Sklar et al, since this is to be used with any laser, as taught by Sklar et al; to also configure the laser to coagulate as taught by Belkin et al, since this would render the device more versatile, at no extra cost; to employ the particular laser parameters claimed since these provide no unexpected result, and are within the scope of one having ordinary skill in the art as shown by Anderson et al; to alternate cutting and coagulating pulses, since this enables bloodless surgery, as taught by Dwyer et al; to employ an articulated arm with refocusing convex lenses since these are notorious in the art for

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transporting infrared radiation such as that from Carbon dioxide lasers, official notice of which has already taken; and to use a galvanometer to alternate the beams, since these are notorious for moving optical components official notice which has already been taken thus producing a device such as claimed.

Claims 4, 5, 9, 10, 20-24, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sklar et al combination with Dew ('969), Anderson et al, Belkin et al, and Dwyer et al as applied to claims 1-3, 6-8, 11-14, 17-19, 41, and 43-49 are above, and further in view of Assa et al. Assa et al teach a scanning handpiece and the equivalence of carbon dioxide and Erbium YAG lasers. Thus it would have been obvious to the artisan or ordinary skill to employ and handpiece as taught by Assa et al, since this allows more consistency of treatment and to employ an erbium laser, since these are equivalent to the carbon dioxide laser, thus producing a device such as claimed.

Applicant's arguments filed May 5, 2001 have been fully considered but they are not persuasive. The arguments are not convincing for the reasons set forth above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Shay whose telephone number is (703) 308-2215. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (703) 308-0944.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

Shay/DI

July 18, 2003



DAVID M. SHAY
PRIMARY EXAMINER
GROUP 330